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## Illustrated Wood-Worker.

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### ILLUSTRATIONS.

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### Our Illustrations.

OUR title-page this month contains a wall cabinet designed by Mr. Kuhns, of Philadelphia. It is drawn boldly in the modern Gothic manner. The front opened reveals shelves, on which may be kept valuables in the way of curiosities; on the top can be placed vases or relics of antique design; on the sides are locked cases, and underneath places for books, etc.; on the right-hand side is a globe, and the upper panels of front door is ornamented with stars, and the crescent moon. The construction is simple and easy of manufacture. Plates 34 and 35 show two lessons on "handrailing," and a few drawings from subscribers.

Plate 36 shows a "cabinet" designed by Mr. Fieder, of this city. This is an excellent design, and so arranged that almost any intelligent workman can construct it.

Plate 37 shows what can be done by an amateur. This book-case and writing-desk was designed and executed by Mr. George O. Woodcock, Claremont, N. H. It is built

of black walnut, with polished brass trimmings; the door panels are decorated tiles. The front and side are shown; also a view of the interior arrangement. The construction is simple and easy.

We wish others of our amateur subscribers would send us drawings of their works, accompanied with descriptive matter. We would gladly make room for some of their "efforts" in this line.

Plates 38 and 39 are illustrative of lessons in "practical carpentry" and "projection." The latter is the initial plate of a series that were used by Mr. Robert Riddell while teaching the "artisan classes" in the High School, Philadelphia, last winter.

Plate 40 shows a very handsome "farm-house mantel," and contiguous finish. It was designed by Mr. Fieder, architect of this city, and is one of the cosiest and most home-like pieces of work we have seen for some time. There are many things about this mantel that will be as suggestive to the practical workman as they will be to the amateur or art student.

### Stray Notes.

THE harvest is at hand, and working-men should make the best of it when it arrives.

Eschew extravagances of every kind, and see that a small sum is safely laid aside weekly, for the sure-coming rainy day. The outlook is brightening in the Western cities, and wages all over the country are stiffening. Shops and factories that have been closed for years are starting up, and every thing bids fair for a season of industrial prosperity; let the workman take advantage of the prosperous wave, and so strengthen his position that when dulness and disaster return, as they will return, he can stand the pressure without severe suffering.

THERE was a decided increase in the demand for fancy suites of furniture last, over previous months. In medium and better class furniture manufacturers report trade as averaging "pretty fair," but the feeling is that, so far, it has not come up to the general expectation. Still, every thing indicates improvement.

THE report of the New York Building Superintendent shows that for the first three months of 1879 the estimated cost of the buildings was \$3,137,663, and they were classified as follows: First-class dwellings, 138; second-class dwellings, 55; French flats, 46; tenement-houses, 68; first-class stores, 7; second-class stores, 2; and third-class stores, 5; 1 office building, 17 workshops, 6 public buildings, 1 church, 18

stables, and 29 frame buildings. Of the 393 buildings, 293 are situate north of Fortieth Street.

In Chicago, Sandusky, St. Louis, Philadelphia, Fort Madison, and Detroit, the building "outlook" is equally encouraging.

ORDERS for new cars have been pouring into the manufacturers' offices of late quite lively.

The Harrisburg (Pennsylvania) Car Company has a contract for 1000 coal cars, to be built for the Central Railroad of New Jersey, and one of 600 box cars for the Canada Southern. These contracts will employ 600 men.

The car works of Messrs. Billmeyer, Small & Co., at York, Pa., have received an order to build 700 freight cars.

The Lehigh Car Manufacturing Company at Stemton, Pa., have just completed 500 freight cars for the New York, Lake Erie and Western Railroad Company, and have begun work on another 500 cars order for the same company.

READERS will have noticed our advertisement of "cheap drawings" in the WOOD-WORKER, and will not be surprised if we tell them that the orders received for the goods advertised have astonished us. So great have been the results, that many of the numbers have given out, and we are now unable to supply complete sets, as first advertised. We still have a good supply of "detail sheets," which will be sent as advertised in the present number.

These "detail sheets" have all appeared in the *American Builder*, and those having complete sets of that journal will have no use for the drawings advertised. We mention this to avoid misapprehension, as several parties have written us to the effect that they had similar drawings before, and therefore had no use for a second lot.

WE have all the back numbers of the WOOD-WORKER in stock at present, but do not know how long they will hold out, although we printed a large edition, as they are being sold off very rapidly. Parties desiring back numbers should send for them at once, as it will soon be impossible to obtain them.

### Practical Carpentry.

WE continue the methods of obtaining the curves for Gothic arches of different kinds.

Fig. 1, Plate 38, shows how a four-centred arch can be obtained when the height, width, or span are given. Let  $A C$  be the span of the arch, and  $D B$  its height; divide  $D B$  into five equal parts, in 1, 2, 3,  $g$ ,  $B$ , and set off on the line  $A C$ , from  $A$  and  $C$ , three of

those parts to  $A h$ ,  $C k$ . Then from the point  $g$ , with the radius  $g h$ , describe the arc  $n h k o$ , and from the points  $h k$ , with the radius  $A h$  or  $C k$ , describe the arcs  $A n$ ,  $C o$ . From the intersections of these arcs with the arc  $n h k o$ , and through the centres  $h k$ , draw  $n h F$ ,  $o k E$ . Then bisect  $n B$ ,  $o B$  in  $l$  and  $m$ , and produce the lines until they meet  $n h F$  and  $o k E$  in  $F$  and  $E$ , which two last points are the centres of the arcs  $n B$ ,  $o B$ .

*Another Method.*—Bisect the width of the arch  $A C$  (Fig. 2) in  $D$ , draw the perpendicular  $D B$ , and make it equal to the height of the arch. Divide it into three equal parts: through the second division draw  $2 E$  parallel to  $A C$ , intersecting the line  $C E$  drawn from  $C$  perpendicular to  $A C$  in  $E$ . Join  $E B$ , and draw from  $B$  the line  $B G F$  at right angles to it. On  $C A$  set off  $C H$  equal to  $D 2$ ; and on  $B F$  set off  $B G$  equal also to  $D 2$ : join  $G I$ , and bisect it at  $n$ . From the point  $F$ , where the bisecting line meets  $B G F$ , draw  $F H k$ . Then  $H$  will be the centre of the arc  $C k$ , and  $F$  the centre of the arc  $k B$ . For the other side of the arch, draw  $F m$  parallel to  $A C$ ; and from the centre line  $B D$  produced, set off  $m$  equal to  $F$ : draw  $m l$ .

*Another Method.*—Divide the height  $D B$  (Fig. 3) into two equal parts, and draw  $1 E$  parallel to  $A C$ , and meeting the perpendicular  $C E$  in  $E$ . Join  $B E$ , and draw  $B F$  at right angles to it: set off from  $C$  and  $B$  the points  $H$  and  $G$ , equal to  $D 1$ . Join  $H G$ , and bisect the line in  $k$ . The point  $F$ , in which the bisecting line of  $G H$  cuts  $B F$ , is the centre of the larger arc  $l B$ , and  $H$  is the centre of the smaller arc  $C l$ .

*To describe a Gothic arch by the intersection of straight lines, when the span and height are given.*—Bisect  $A C$  (Fig. 4) in  $D$ , and from the point  $D$  and the extremities of the line draw  $A E$ ,  $D B$ ,  $C F$  at right angles to  $A C$ , and each equal to the height of the arch: join  $E B$ ,  $B F$ . Divide the line  $D B$  into any number of equal parts, 1, 2, 3,  $B$ , and through the divisions draw lines parallel to  $A C$ . Divide the line  $E B$ ,  $B F$  into the same number of equal parts, and from  $A$  and  $C$  draw lines  $A 1$ ,  $A 2$ ,  $A 3$ ; and their intersection with the horizontal lines in  $f$ ,  $g$ ,  $h$ , will be points in the curve required.

*To draw the arches of Gothic groins, to mitre truly with a given arch of any form.*—Let  $A C$  (Fig. 5) be the width of body range, and  $B D$  its height. Join  $C B$ , and divide it into any number of equal parts: from the centre  $D$ , through the points of division, draw straight lines  $D 1$ ,  $D 2$ ,  $D 3$ ,  $D 4$ , meeting the circumference of the arch in  $l$ ,  $m$ ,  $n$ ,  $o$ . From  $B$ , through these points in the circumference, draw  $B o$ ,  $B n$ ,  $B m$ ,  $B l$ , and produce them to meet a perpendicular raised from  $C$ .